

**REMARKS**

Claims 1-3, 5-17, 19-27 and 38-67 are pending in the application.

Claims 1-3, 5-17, 19-27 and 38-67 have been rejected.

**Rejection of Claims under 35 U.S.C. § 103(a)**

Claims 1-3, 5-7 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over U.S. Publication No. 2001/0014097 by Beck, et al. (“Beck”), in view of TCP/IP Illustrated, Volume 1: The Protocols (“TCP/IP”). Applicants respectfully traverse this rejection.

**Claim 1**

Applicants respectfully submit that the cited references fail to disclose that a first and second communication link provide redundant connections between a first network device and a virtual network device. Applicants argued this position previously, and in response, the Office Action states that Beck’s FIGs. 2 and 7 disclose the claimed features. Office Action, p. 2. Applicants have considered the cited portions of Beck and respectfully disagree.

The Office Action cites portions of Beck as purportedly disclosing these features, stating that there are multiple links between a cluster and processor nodes. Office Action, p. 2. This statement is unclear since Beck’s cluster is simply the processor nodes coupled to act in concert with each other. *See* Beck, ¶ [0002]. The Office Action also points to Beck’s ¶ [0026] as purportedly disclosing this feature. *Id.* Beck’s ¶ [0026] is simply a description of how Beck’s cluster is configured, and how the processor nodes therein are connected to each other and a subnet. Beck, ¶ [0026]. However, the cited passage fails to disclose redundant connections to an external network device. The Office Action states that providing redundant connections between networked elements is well known. The accuracy of this assertion is irrelevant since it is not merely “providing redundant connections between networked elements” that is claimed. Instead, Applicants’ claims are specifically directed to a virtual link bundle comprising multiple communications

links providing redundant connections between a network device and a virtual network device. Applicants respectfully submit that the cited portions of Beck fail to disclose these features. Applicants note that TCP/IP is not cited as purportedly disclosing these features and respectfully submit that TCP/IP fails to do so.

### **Claim 2**

Applicants respectfully submit that the cited references fail to disclose a network device configured to select one of a plurality of communication links on which to send a packet. The Office Action cites portions of Beck as purportedly disclosing these features, stating that sending a packet “to the network for delivery to a particular node” discloses this feature. Office Action, p. 6 (citing Beck, ¶ [0009]. However, Applicants respectfully point out that Beck’s ¶ [0009] refers to intra-cluster communications between nodes of a cluster, not communications over a communications links between a network device and a virtual network device (which the Office Action equates with Beck’s cluster). Thus, even if this passage did disclose selecting a communications link, which Applicants maintain is not the case, such a communications link would only couple nodes within a cluster and accordingly would not be comparable to the claimed communications links, which couple a network device to a virtual network device. Furthermore, Applicants respectfully submit that while the cited portion of Beck may disclose selecting a particular node, the cited portions fail to disclose multiple communications links connected to the node and a network device configured to select one of the multiple communications links. Applicants note that TCP/IP is not cited as purportedly disclosing these features and respectfully submit that TCP/IP fails to do so.

### **Claim 7**

Applicants respectfully submit that the cited passages of Beck and TCP/IP fail to disclose multiple communications links configured to be managed as a single link. The Office Action states that Beck’s disclosure of using aliases to make a cluster appear as a single node discloses this feature. Office Action, p. 7. Applicants respectfully submit that such disclosure is irrelevant to the claimed feature. Even if Beck’s cluster does appear to be a single node, that says nothing about the number of links connected to the cluster or

the configuration of those links. Applicants note that TCP/IP is not cited as purportedly disclosing these features and respectfully submit that TCP/IP fails to do so.

Applicants respectfully submit that claims 1, 2, and 7 are allowable for at least the foregoing reasons. Applicants respectfully submit that claims 3 and 6 are allowable at least by virtue of depending from claim 1. Accordingly, Applicants respectfully request the Examiner's reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

Claims 8-17, 19-20, 22-27, 38, 40-48, 50-58, 60-67 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Beck, et al., in view of U.S. Publication No. 2005/0083933 by Fine, et al. ("Fine"). Applicants respectfully traverse this rejection.

#### **Claim 8**

Applicants respectfully submit that the cited references fail to disclose a first and second interface that are both identified by a first logical identifier. The Office Action states this feature is somehow disclosed by Beck's FIG. 2 and ¶ [0027]. Office Action, p. 7. Beck's ¶ [0027] describes how multiple nodes in a multi-node cluster can be referred to by a cluster alias and then redirect packets to a specific node. Applicants note that the cited portions of Beck fail to include any explicit reference to any type of interface, much less one comparable to the claimed interfaces.

The Office Action states that "interfaces are associated with an IP address." *Id.* Even if the cited portions Beck did disclose a first and second interface, a point Applicants do not concede, each processor node has a unique 32-bit IP address (S1.A, S1.B, and S1.C). *See* Beck, FIG. 2 and ¶ [0026]. Thus, Beck's "interfaces" are associated with unique addresses. Therefore, Beck fails to disclose a first and second interface that are both identified by a first logical identifier.

Applicants respectfully submit that the cited portions of Beck also fail to disclose an interface bundle, as recited by claim 8. The Office Action states that Beck "discloses a grouping of processor nodes called a cluster with interconnected communication links."

Office Action, p. 7. Applicants respectfully submit that a grouping of processor nodes is not comparable to an interface bundle and does not require an interface bundle. That is, a cluster of nodes is not the same as a bundle of interfaces. While a cluster can include multiple interfaces (e.g., one or more per node), the cluster need not (and in Beck's case does not) bundle the interfaces. Given this fact, and the fact that Beck makes no explicit reference whatsoever to an interface bundle, Applicants respectfully submit that this feature is not disclosed by the cited portions of Beck. Applicants note that Fine is not cited as purportedly disclosing these features and respectfully submit that Fine fails to do so.

### **Claim 17**

Applicants respectfully submit that the cited references fail to disclose a virtual network device sub-unit configured to learn that a source address of a packet is behind an interface on a separate virtual network device sub-unit, in response to receiving the packet via a virtual network device link, as claimed. The Office Action cites Beck's ¶¶ [0009] and [0039]-[0041] (with respect to claim 47, which has substantially similar features as claim 17) as purportedly disclosing a these features. Office Action, pp. 11 and 19.

Applicants note that the packets referred to in Beck's ¶ [0039]-[0041] are packets addressed to the cluster alias. This means that the packets referred to are received from an external router, and not from another processor node within the cluster. Thus, the packets are not received from via an intra-cluster communications link. On the other hand, claim 17 recites receiving packets via a virtual device network link, which has a first end coupled to a first virtual network device sub-unit and a second end coupled to a second virtual network device sub-unit.

Furthermore, the cited passages refer to detecting a destination of a packet, not to learning the source of a packet. *See, e.g.,* Beck ¶ [0039] (“the skinny stack application determines a processor node...to which the packet will be transferred.”). (emphasis supplied) On the other hand, claim 17 explicitly recites the virtual network device sub-unit is configured to learn a source address of a packet. Since the cited passages refer to detecting destination addresses and claim 17 refers to learning source addresses,

Applicants respectfully submit the cited passages fail to disclose each element of claim 17. Applicants note that Fine is not cited as purportedly disclosing these features and respectfully submit that Fine fails to do so.

### **Claim 23**

Applicants respectfully submit that the cited references fail to disclose a virtual network device sub-unit configured to prioritize sending a packet via a first interface of an interface bundle over sending the packet via a second interface of the interface bundle. The Office Action cites portions of Beck as purportedly disclosing this feature, stating that Beck discloses that if one processor node crashes, another takes over. Office Action, p. 13. The cited portions of Beck disclose that when first processor node having a first address fails, a second processor node having a second address and a third processor node having a third address decide which (the second or third) processor node will acquire the address of the failed processor node. *See* Beck ¶ [0076]. This is not comparable to claim 23. This is a selection of which processor node will be used to send a packet, the processor nodes having distinct (non-identical) identifiers. Furthermore, once the selection of which processor node will adopt the failed processor node's address is made, the packets are sent by that processor node. That is, no selection between interfaces is made in Beck once the failover completes. On the other hand, claim 23 recites features of a system configured to select between sending a packet over a first interface and sending the packet over a second interface where both the interfaces are identified by the same identifier. Applicants respectfully submit that the cited portions of Beck do not disclose such features. Applicants note that Fine is not cited as purportedly disclosing these features and respectfully submit that Fine fails to do so.

Applicants respectfully submit that claims 8, 17, and 23 are allowable for at least the foregoing reasons. Applicants respectfully submit that independent claims 19, 38, 41, 48, 51, 58, and 61 recite substantially similar features as claims 1 and 8 and are similarly allowable. Furthermore, Applicants respectfully submit that claims 9-17, 20, 22-27, 40, 42-47, 50, 52-57, 60, and 62-67 are allowable at least by virtue of depending from allowable independent claims. Accordingly, Applicants respectfully request the

Examiner's reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

Claims 21, 39, 49 and 59 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Beck, et al. and Fine, et al. in view of U.S. Patent No. 6,735,205 issued to Mankude, et al. ("Mankude"). Applicants respectfully traverse this rejection.

Applicants respectfully submit that these claims are allowable at least by virtue of depending from allowable base claims. Accordingly, Applicants respectfully request the Examiner's reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

### CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at (512) 439-5092.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

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